

**PROTEIN KINASE C EPSILON AS MODULATOR OF ANXIETY, ALCOHOL
CONSUMPTION AND SELF-ADMINISTRATION OF DRUGS OF ABUSE**

ABSTRACT OF THE DISCLOSURE

5 The present invention is directed to the production of PKC isozyme ϵ (PKC ϵ)-deficient cells and non-human animals. The present invention is further directed to the identification of PKC ϵ as a target for drugs that reduce anxiety. According to the present invention, PKC ϵ -inhibiting compounds act in synergy with drugs acting at the GABA $_A$ receptor. The present
10 invention is also directed to the use of modulators of PKC ϵ to modulate alcohol consumption, self-administration of other drugs of abuse, and the effects of alcohol consumption as well as the use of inhibitors of PKC ϵ , either alone or in conjunction with allosteric agonists of GABA $_A$ receptors, to treat conditions, such as addiction, withdrawal syndrome, skeletal muscle spasms, convulsive seizures, and epilepsy, that are amenable to treatment by allosteric agonists of
15 GABA $_A$ receptors. Additional aspects of the present invention are diagnostic methods for identifying individuals at risk for becoming alcoholics or abusers of other drugs and kits for performing such diagnostic methods.

20 The present invention relates to: cells and non-human animals deficient for the PKC isozyme ϵ (PKC ϵ); the use of PKC ϵ as a target for drugs; the use of inhibitors of PKC ϵ in methods of reducing anxiety and treating conditions associated with insufficient activity of the GABA $_A$ receptor; the use of modulators of PKC ϵ in methods of modulating alcohol consumption, modulating self-administration of other drugs of abuse, and altering the effects of alcohol; pharmaceutical compositions comprising inhibitors of PKC ϵ and allosteric agonists of GABA $_A$ receptors; and the identification of individuals with enhanced susceptibility to
25 alcoholism or other forms of addiction.